

## CLAIMS

1. A device (12) for optically regenerating pulses, the device comprising time synchronization means (14) and intensity fluctuation stabilization means (14) for the pulses, and being characterized in that it further comprises noise suppression means (16) that are distinct from the synchronization means (14) and the stabilization means (14).
2. An optical regenerator device (12) according to claim 1, characterized in that the time synchronization means and the intensity fluctuation stabilization means comprise a synchronous intensity modulator (14).
3. An optical regenerator device (12) according to claim 1 or claim 2, characterized in that the noise suppression means comprise a saturable absorber (16) for suppressing amplified spontaneous emission noise.
4. An installation for optically transmitting pulses comprising light signal propagation means (10) and characterized in that it includes an optical regenerator device (12) according to any one of claims 1 to 3, inserted in the propagation means.
5. An optical transmission installation according to claim 4, characterized in that the propagation means (10) comprise first propagation means (10a) having abnormal dispersion and second propagation means (10b) having normal dispersion, the time synchronization means (14) and the intensity fluctuation stabilization means (14) being inserted in the vicinity of the junction between the first and second propagation means.
6. An optical transmission installation according to claim 4 or claim 5, characterized in that the noise

suppression means (16) are situated upstream from the synchronization means and the stabilization means in the pulse propagation direction.

- 5 7. The use of a device according to any one of claims 1 to 3, for regenerating DM soliton pulses.